CLAIMS

1. A method for controlling a diaphragm or piston pump that is actuated via a ram or a connecting rod by a cam which is powered by an electric motor,
characterised in that
the diaphragm or piston of the pump is moved by the drive unit of the cam at approximately constant speed throughout the compression stroke, taking into account the position of the cam, to assure an approximately constant volume flow of the metered medium.

2. The method according to claim 1,
characterised in that
the drive unit drives the cam during the compression stroke with a rotating speed profile that compensates for temporal cosinusoidal movement of the piston or diaphragm conditioned by the cam.

3. The method according to claim 1 or 2,
characterised in that
the speed profile of the drive unit has approximately the shape

$$\omega(t) = 2/T_D \times (1 - (-2/T_D \times t + 1)^2)^{-1/2}$$

in the compression stroke throughout the period of constant diaphragm speed.

4. The method according to any of the preceding claims,
characterised in that
the drive unit moves the cam with a different speed profile, particularly with constant and/or higher speed, during the aspiration stroke.

5. The method according to any of the preceding claims,
characterised in that
the delivered volume flow of metered medium is increased shortly before the end of the compression stroke in order to compensate for the metering gap during the aspiration stroke.

6. The method according to any of the preceding claims, characterised in that
an EC motor, preferably with integral rotor position sensors, is used as the drive unit.

7. The method according to any of the preceding claims, characterised in that
in order to control the cam speed, the cam position is captured by a sensor and/or is calculated from position sensor signals that are in the drive unit.